REASONS

Why the Practice of ~~Hath not~~

INOCULATION

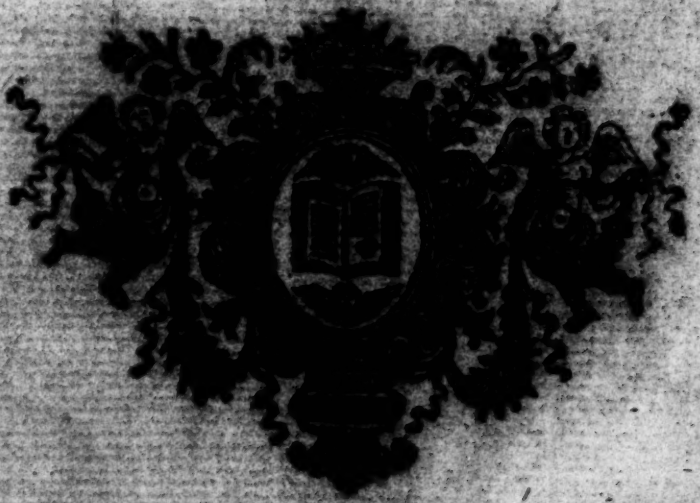
Ought to be introduced into the

Town of *BURY*

AT PRESENT.

a. 4887.

D^r. Hartley. R



BURY St. EDMUNDS:

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MVSEVM
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SOME REASONS, &c.

1. THE Number of People who have not had the *Small Pox* is ſo great, that in the Way of accidental Propagation it will probably remain in the Town a very long Time ſtill, to the vaſt Detriment of all Trade and Buſineſs, and perhaps the Loſs of the Aſſizes, Seſſions, Fair and other publick Meetings: Whereas if Inoculation was generally practiſed, it might be got through the Town in a very ſhort Time. In the firſt Caſe we may have it two Years; in the Laſt, we need not have it ſix Months.

2 As the utmoſt Hazard of dying of the inoculated *Small Pox*, appears by the laſt authentic Accounts, to be no more than that of 1 in 50, and by the ſame Accounts that of dying of the Natural is ſhewn to be that of One in Six; it would be the Means of ſaving great Numbers of Lives. For Inſtance, let us ſuppoſe that there are Three-thouſand Perſons in *Bury* who have not had the *Small Pox*: The 50th Part of Three-thouſand, or the Number

of Persons which may be supposed to die of Inoculation, is Sixty, but the 6th Part of Three-thousand, or the Number of Persons that are to be supposed to die of the natural *Small-Pox*, is 500. Deduct Sixty from Five-hundred, and there will remain Four-hundred and Forty for the Number of Lives which may be clearly saved by Inoculation upon this Supposition.

UNDER this Article it is to be observed, that the inoculated *Small Pox* has been found to be as favourable to grown People, as to Children; but all the World knows the Contrary is True of the Natural in a high Degree. So that if we consider the Value of the Lives as well as the Number, we shall have still farther reason for the Practice: For I suppose every One thinks the Life of a grown Person (especially of the Head of a Family) to be of more Consequence than that of a Child.

IT is also probable that the Hazard of dying of the inoculated *Small Pox* is less than that of One in Fifty. An impartial Judge who reads the Accounts of those who died after Inoculation will see, that the Death of several cannot in Reason and Justice be imputed to *that*, and it is much to be questioned whether the Preparation before Inoculation, the Pustules from whence the Matter was taken, and the Management of the Patient during the Distemper have been in most Cases, such as they ought to have been, and such as they

may

may be for the future. Dr. *Nettleton* out of a Hundred and Nineteen, which he inoculated, had only one that miscarried. He is a Physician in *Yorkshire*, whose Skill and Integrity no Man that knew him ever yet called in Question; and in a Letter to Me, dated *February* 27, 1729-30. when the *Small Pox* was much at *Newark*, he says where due Care is taken of the Choice of the infectious Matter, Inoculation will very rarely fail of Success.

It is also to be observed that all those, who have not had the *Small Pox*, and resolve to continue in the Town must almost certainly have it now; at least Children, and those who go much about. So that to *these* under the present Circumstances of the Town, it is only necessary to determine whether they will have the Chance of 50, perhaps 60, 80, or 100, or even more for their Lives, or that of 6 to 1 for 'em. One they must have.

3. As this Distemper is infectious, and produces it self, so the several Sorts of it produce themselves: A favourable Sort produces a favourable One; a malignant Sort a malignant One. This is certain in Inoculation, and very highly probable in the natural Way. As it advances, therefore the Kind will grow worse and worse, for where the Infection is taken from different Persons (and as it advances this will be more and more the Case) the Good can't correct the Bad, but the Bad will prevail over the Good. And here Experience confirms

firms our Reaſoning, for it is obſerveable, that agreeably to that, the *Small Pox* is for the moſt Part favourable at its firſt coming into a Town, but as it ſpreads, grows more malignant. Now in the Caſe of Inoculation, not above 1 in 50 has a bad Sort, perhaps not above 1 in 60, 80, or 100 as was hinted before. Inoculation therefore would be a great means to preſerve the ſort good; ſo that even thoſe who have it not by Inoculation will have a fairer Chance, but in the natural Way where at a Medium 1 in 6 die, at the Time of the Town's being moſt infected 1 in 5, 4, or 3 may die: Nay perhaps more among grown Perſons. At *Uxbridge* near *London* 51 died out of 140, which is ſomething more than 1 in 3.

4. The laſt Reaſon is the general Good of Mankind. Dr. *Jurin* has ſhewn that at leaſt a 14th part of Mankind die of the natural *Small Pox*, and within the Bills of Mortality it deſtroys at a middle Reckoning conſiderably more than 2000 Perſons Yearly as appears from them: But it is very probable that if Inoculation was generally practiſed, we ſhould arrive at ſuch Perfection in it, that few or none would die. We have then a moſt happy Opportunity of ſerving Mankind at the ſame Time that we ſerve our ſelves. Indeed it is much to be feared, that Inoculation will never prevail, but by being introduced in ſuch Caſes, as ours is at preſent, where People are almoſt under a

neceſſity

neceſſity of having it, and are only to chuſe whether they will have it in a more or leſs dangerous Way. If beſides the Loſs of ſo many Lives we conſider the Fears and Uneaſineſſes of People for themſelves, of Parents, Children, Relations and Friends for them, their own Uneaſineſs at not being able to viſit their Friends under this Diſtemper, the Unfitneſs for Buſineſs which it lays many under, *&c.* one has ſtill greater Reaſon to wiſh that this was the general Practice in Children, from the Age of 2 or 3, to that of 7 or thereabouts. And when we call to mind the Indignation and Contempt which we have for the Oppoſers of Bark, Opium, and Mercury in Phyſic, Reformations in Religion, the wiſeſt Laws in Government, or of any Thing elſe, which is Great and Good (and Oppoſition has generally been the Fate of every ſuch Thing, either out of Intereſt and Diſhoneſty, or Ignorance, Folly, and Superſtition) it ſhould make us ſeriouſly reflect what Cenſures Poſterity may juſtly paſs upon us in the preſent Point.

THE Objections that are made to this Practice are generally theſe.

I. WE are not certain that Inoculation is a Security from having the Diſtemper again.

THIS Objection may be anſwered thus. 1. Several Perſons who have been inoculated, have been made to converſe with, to handle, nurſe, lie

lie in the ſame Bed with others ſick of the natural *Small Pox*, and no one ever had it again, as far as they that have enquired can learn. 2. Several Stories, that have been invented to perſwade the World of the Contrary, have been detected, and ſhewn to be Forgeries. 3. As the inoculated *Small Pox* is in every minute Circumſtance, exactly like the natural One, of the ſame Kind and Degree, it would be very extraordinary, and contrary to the whole Courſe of Nature's proceedings in ſuch Things, if it ſhould not be like in this. Whatever be the Reaſon why the natural *Small Pox* preſerves us from future Infection, it is inconceiveable that the Inoculated ſhould not do the ſame, for the ſame Reaſon. Indeed if the natural *Small Pox*, eſpecially of a favourable Sort, be not an abſolute Security, which is the Opinion of ſome, neither can the Inoculated be ſuppoſed to be: But this if True, yet is ſo rare as not to deſerve Notice. I ſuppoſe no one would deſire a bad Sort, rather than a good One, for that reaſon.

II. ANOTHER Objection to the Practice of Inoculation is, that the inoculated *Small Pox* often leaves bad Conſequences, as Conſumptions, Boils, and Blotches, weak Eyes, *&c.*

THAT the natural *Small Pox* is apt to leave the ſame Sort of ill Conſequences is known to every one; and yet there are Methods, which will for the moſt Part entirely prevent or remedy

medy them, and always do it in ſome degree. The Objection therefore to have its proper Force muſt ſuppoſe, that Inoculation leaves more or worſe Diſorders, than the natural *Small Pox*, and in order to know whether this be ſo or no, it will not be improper to enquire firſt, what is the Reaſon of theſe Diſorders at all. In the Declenſion of the *Small Pox*, a Quantity of corrupted Matter returns into the Body, and mixes with the Blood; as is evident from the falling of the Face, Hands, and Feet which were before much ſwelled and inflamed: And tho' ſuch be the excellent Contrivance of a human Body, that it converts Things of moſt different Natures into Blood, proper for its Nouriſhment and Uſes, as we daily ſee in the vaſt variety of Things which all make healthful Food for Mankind, yet it cannot entirely overcome this corrupted Matter returning into the Veſſels, ſo as to make *that* in all Things fit for the purpoſes of Life and Health, but ſuffers from thence the ſecondary Fever firſt, then what Phyſicians call Obſtructions and Acrimonies, in which laſt conſiſt the Diſorders abovementioned. One would naturally think therefore, that where the moſt corrupted Matter, and of the worſt Kind

returned into the Blood, there the Disorders succeeding the *Small Pox* should be most and worst, and so we generally find it; but then there are a great many Accidents happening in the Conclusion of the Distemper, which concurring with the different Age, Constitution, manner of living, different Methods used by different Physicians, *&c.* make sometimes a malignant *Small Pox*, leave few ill consequences, and a favourable one leave many: And particularly I think it is true that many who have the distinct Kind and soon recover their usual Health to appearance, and often more than their usual Appetite, are so defective in the Rules of Abstinence, and proper Physic, as to fall into an ill Habit of Body some time after. Now that something like this has been the Case with several that have been inoculated, is not at all improbable, since it is remarkable that in *London* great pains have been taken to perswade People, that Inoculation neither wants Preparation before, the Attendance of a Physician during the Distemper, nor Care afterwards: but this affects not those who will take Care afterwards. As was said in the 3d Answer to the foregoing Objection,

it is inconceivable how the inoculated *Small Pox* should be like the Natural in the whole Progreſs of the Diſtemper, and yet differ in this: And to be more particular, it is inconceivable how a Quantity of corrupted Matter falling into the Body ſhould be the occaſion of the Diſorders ſucceeding the *Small Pox* (a thing which all Phyſicians allow) and yet the inoculated *Small Pox*, where there is leſs of that Matter, and that of a more kindly Nature, be attended with worſe Conſequences. Now when any Matter of Fact is ſaid to contradict ſuch plain Reaſoning as this is, one may be allowed to examine ſtrictly into the Evidence for that Fact. Let us examine then. And firſt it is altogether impracticable to make any Eſtimate of the ill Conſequences that attend the natural *Small Pox*, and therefore in like manner impracticable to compare the Natural and Inoculated together in that Reſpect. Then if any happen to ſuffer after the Inoculated, it is immediately in everyones Mouth and that with many Aggravations. In the Natural we hear nothing of thoſe who tho' they eſcape with Life are yet ſeverely afflicted with the ill Conſequences of it. In the Inoculated except the Patient go through the whole Stage of

of the Diſtemper without any ill Symptom, and continue free from any afterwards, perhaps without due Care to make him ſo, as was ſaid, we are ſure to have the moſt made of it againſt the Practice. Nay there have been Caſes, where Stories to diſcredit it have been entirely invented. One would wonder that there ſhould be any, who tho they may have Baſeneſs enough to affirm what they know is falſe, can yet be ſo ſtupid as to do it, when they are ſure they may and muſt be detected and expoſed. But I believe every ones own Experience will furniſh ſome Inſtance of it. There are Men in the World who love to triumph, be it only for a Week or a Day, even when they cannot but be convinced, all will then end in their own Confuſion; and it is notorious that Inoculation has met with ſome ſuch Oppoſers, as may be ſeen in Dr. *Jurin*'s Accounts of it.

THE Anſwer to this Objection then in ſhort is this. It compares the ill Effects of the natural and inoculated *Small Pox* together, affirming that thoſe of the laſt, are worſe than thoſe of the firſt, but fails in the Eſtimate of both ſides of the Compariſon. The Eſtimate of the firſt can never

ver be had, and that of the laſt is groſly miſ-repreſented. This Evidence therefore will never ſupport a Poſition ſo contrary to all common Senſe as this, *viz.* that where the Quantity of corrupted Matter returning into the Blood is leſs, and alſo leſs corrupted; there the ill Effects of it ſhould be more ſevere. I will here add what I had from Dr. *Jurin* laſt *April*. He collected the Accounts of all (in Number 724) that were inoculated in *Great Britain* for ſome Years, during which he was Secretary to the ROYAL SOCIETY: And it muſt be acknowledged he has done it with the utmoſt Impartiality. Upon my aſking him what his real Opinion about the Practice was, and particularly whether the ill Conſequences that attend the inoculated *Small Pox* were worſe than thoſe of the Natural; he anſwered, that as far as he knew they were not, and that his real Opinion of Inoculation might eaſily be known, becauſe he had juſt inoculated one of his own Children.

III. A third Objection is that by Inoculation we may communicate other Diſtempers.

Moſt

Most chronical Distempers (that is such as are not Fevers) are chiefly owing to the irregular Make of the Vessels thro' which the Blood and Juices pass, and as Children often resemble their Parents in the Features of the Face, so they may resemble them in the make of these Vessels, and by that means may have many Distempers hereditarily. Now if this was the Case of all, it would be as just to affirm that Inoculation could communicate the Features of another Man's Face, as communicate other Distempers. But it must be acknowledged that there are several which may be communicated by methods, no ways consistent with this Account: It cannot therefore be universally True. For instance, a Child receives its whole Sustenance from the Milk which has circulated thro' the Body of a Nurse, afflicted with scrophulous Complaints, and has them from her. Nay some are of Opinion, that lying much in the same Bed with People of distempered Constitutions is of bad Consequence. But no one is afraid of such Infection in the ordinary Intercourses of Life, and yet in them we continually receive by means of the Air which we breath, (perhaps by other means) such Particles as fly

from the Bodies of those we converse with. This is the Method in which the *Small Pox* is Infectious, and he that will affirm, that Inoculation gives other Distempers, will find it hard to prove that accidental Propagation will not do the same, for the same Reason; and that the common Intercourses of Life should not much rather do the same, since there we often receive into our own Bodies greater Quantities from those of others, than the Matter of Inoculation amounts to. There has been no Instance of this Kind produced that ever I heard of. The infectious Matter according to Experience, appears to communicate nothing but what it was intended to communicate, the *Small Pox*. It was never pretended to have left an hereditary Complaint, such as the Person from whence it was taken was afflicted with. And if all that has hitherto been advanced upon this Head should be set aside, yet there are enough of the laborious Part of Mankind where we have moral Certainty, that they have sound and healthy Constitutions. I am sure no Parent would put their Child out to a Nurse, but upon such Supposition.

IV.

IV. I come now to another Objection which is foreign to me as a Phyſician, but belongs to us all as Men. In this Capacity I have a ſtrict Obligation not to miſtake my Duty, and therefore a ſufficient Right to enquire: This then is my Apology for doing ſo here. The Objection is that the Practice is ſinful: That is, that a Practice which would reſtore Trade and Buſineſs, and the Means of living to many, who now want it, which would ſave great numbers of Lives, and which might be of ſingular Service to all Mankind, by either promoting or diſcouraging its farther Progreſs, is a thing forbidden us by infinite Goodneſs, who ſent us here to imitate his own Perfections, and that moſt eſpecially in doing good. At firſt ſight this ſeems to be a very inconſiſtent and unamiable Repreſentation of the Parent and Governor of the World, ſuch a one as would be unworthy of an earthly Father, or a wiſe and beneficent Magiſtrate. At firſt ſight it ſeems, that if all, or the principal Part of what is here offered be true, this Objection muſt fall to the Ground of Courſe. But perhaps in another View of things it may appear otherwiſe. The Objectors ſay then that it is ſinful to endanger

danger our Lives voluntarily. Be it ſo, Conſider now 50 Perſons in this Town who have not had the *Small Pox*, and let us ſuppoſe that 2 eſcape and 48 have it, or that 8 eſcape and 42 have it, or that 14 eſcape and 36 have it, or that 20 eſcape and 30 have it, or laſtly that 26 eſcape and 24 have it.

In the firſt Caſe according to the Hazard above given of the natural *Small Pox* (that of 1 in 6) 8 will die, in the 2d 7, in the 3d 6, in the 4th 5, and in the laſt 4; for the 6th Parts of the Numbers 48, 42, 36, 30, 24 are 8, 7, 6, 5, 4 reſpectively.

He therefore who waits for the natural *Small Pox* runs the Hazard of 4 in 50, even ſuppoſing the Hopes that he has to eſcape to be more than an equal Chance, which can never be true. He that tries Inoculation has only the Hazard of 1 in 50. If therefore to incur the Danger of Life voluntarily be a Sin, it is a greater Sin to incur a greater Danger, a leſs Sin to do incur a leſs Danger, that is, it is a Sin to do the Firſt, and our Duty to do the Laſt. But ſay they again, the natural and inoculated *Small Pox* are

danger

not equally voluntarily; God brings one upon us, the other is our own doing. What does God confine Men and their Families in the Town? No; but their Affairs and Fortunes do. Shall then a Man for that reaſon ſtand the Hazard of 4 in 50, and not take the leſs Hazard of 1 in 50, to avoid the greater of 4 in 50? And as Men endanger their Lives voluntarily in the preſent Situation of the Town by ſtaying in it, ſo they do, and muſt and ought to do it, by the Voyages and Journeys they daily make, the Phyſic they ſometimes take, and the many Handicraft Trades pernicious to Health which are practiſed.

If it be ſaid that we are to truſt in Providence, the Anſwer is, that Providence has given us Heads and Hands to contrive and execute what is moſt for our Advantage: And to neglect to uſe them for that Purpoſe, is not to truſt in Prpvidence, but to be preſumptuous and ungrateful. To truſt in Providence is to do all we can for our ſelves, and then to believe we ſhall be taken care of. But to believe ſo, till we have firſt done that, is Preſumption. It is affirming that all Buſineſs muſt ſtop, Mankind ſit ſtill

and

and expect that Providence should build for 'em, cloath 'em, and rain down their daily Bread.

A tender Parent says, I shall never forgive my self, if my Child should die of the inoculated *Small Pox*, that I did not stand the Hazard of the Natural. But for the same Reason, supposing the Hazards equal, a tender Parent ought to say, I shall never forgive my self if my Child should die of the natural *Small Pox*, that I did not try Inoculation. And if the Hazards be unequal, what is a tender Parent to say then? If particularly the Hazard of the Natural be more than that of 1 in 6, that of the Inoculated less than that of 1 in 50, the Hopes of escaping the Distemper in Children not 1 in 100, and the ill Consequences of the Inoculated considerably milder than that of the Natural; all which Suppositions in my Opinion are very probable. What would a tender Parent give to have a Child alive again, to try the Chance of Inoculation?

It is often said that many of the Clergy are against the Practice. If they are it is upon a Supposition that the Prac-

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tice does not promote our Lives, Healths and Happineſs: At leaſt all the Gentlemen of that Order that I have had the Honour to converſe with upon the Subject have put it upon that Iſſue. And it is the Buſineſs of this Paper to ſhew that at leaſt in our preſent Situation it would; and whether it is made out to be probable that it would, is ſubmitted to them, and the reſt of the Gentlemen and Tradeſmen of the Town and Country. I have no other View, that I know of, but to ſerve Mankind in general, the Place where I live in particular, and moſt particularly in the way of my Profeſſion, and by doing this to make my ſelf regarded.

January 12. 1732-33.

D. HARTLEY.

FINIS.